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(54) α -SIALON FLUORESCENT SUBSTANCE

(57) Abstract:

PROBLEM TO BE SOLVED: To provide a crystalline, α -sialon fluorescent substance efficiently emitting fluorescence which is excited by blue light, is complementary color to blue and shows a high emission intensity and an excellent color rendering property.

SOLUTION: The α -sialon fluorescent substance employs an α -sialon of the formula:

$M_xSi_{12-(m+n)}Al_{(m+n)}O_nN_{16-n}$ (wherein M is at least one metal element chosen from Li, Mg, Ca, Y and rare-earth elements other than La and Ce; $x=m/\delta$, provided that δ is an average valence of the metal element M; $0.15 < x \leq 1.5$; and $1.8 \leq m/n \leq 2.2$) as a parent material. Here, the metal element M dissolved in the α -sialon is partially replaced with Eu while maintaining a neutral charge.

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